10. A method of preparing diagnostic particles comprising

providing carboxylate-derivatized polymeric core particles between about 0.2 and about 1.0 micron in diameter,

linking avidin molecules to said core particles through amide bonds,

binding biotin molecules to antibody molecules through amide bonds, and

complexing said core particle-linked avidin with a controlled amount of said antibody molecule-bound biotin, whereby said diagnotic particles may be suspended in aqueous medium without agglutination of said particles, but when a substance reactive with said antibody molecules is introduced into said aqueous medium, said particles agglutinate.

11. A method according to claim 10, providing core particles which are carboxylated to between about 0.1 and about 0.5 milliequivalents per gram of polymer.

12. A method according to claim 10 wherein said polymer is selected from the group consisting of polystyrene and polyacrylamide.

13. A method according to claim 12 wherein said polymer is polystyrene, and between about 1.2×10^{-3} and about 1.2×10^{-2} gm of avidin are linked per gram of core particles.

14. A method according to claim 12 wherein said polymer is polyacrylamide and between about 1.2×10^{-3} and about 1.2×10^{-2} gm of avidin are linked per gram of core particles.

15. A method according to claim 10 wherein said avidin is selected from the group consisting of egg white avidin and streptavidin.

16. A method according to claim 10 including neutralizing surface carboxyl groups of said core particles not bound to avidin.

17. A method according to claim 16 including adsorbing a non-immunogenic proteinaceous material onto the surface of said core particles subsequent to avidin linking and carboxyl group neutralization.

18. A method according to claim 10 controlling the amount of antibody molecules by complexing said core particle-linked avidin with a mixture of free biotinic acid and said antibody-bound biotin.

19. A method according to claim 18 controlling the amount of antibody molecules to provide between about 2×10^{11} and about 2×10^{12} antibody molecules per cm^2 of core particles surface area.

20. A method according to claim 19 wherein the molar ratio of said biotinic acid and said antibody-bound biotin is between about 1:1 and about 10:1.

21. A method according to claim 10 wherein said antibody is a monoclonal antibody.

22. A method according to claim 10 wherein linking said avidin to said core particles comprises reacting said core particles with a carbodiimide to form an intermediate and reacting said intermediate with avidin.

23. A method according to claim 22 wherein linking said biotin to said antibody comprises reacting said antibody with an N-hydroxy imide to form an ester intermediate and reacting said antibody with said ester intermediate.

24. A method according to claim 10, including suspending said diagnostic particles in a liquid medium to form a stable suspension.

25. A diagnostic particle in accordance with claim 1 wherein said particle has between about 2×10^{11} and about 2×10^{12} antibody molecules per cm^2 of surface area of said polymeric core.

26. A diagnostic particle in accordance with claim 1 wherein said antibody molecules are linked to a first significant portion of said biotin moieties and a second significant portion of said biotin moieties have no antibody molecules linked thereto.

27. A diagnostic particle comprising

a core between about 0.2 and about 1.0 micron in diameter formed of polymer selected from the group consisting of polyacrylamide and polystyrene, said polymer being carboxylated to between about 0.1 to about 0.5 milliequivalents per gram,

between about 10^{10} and about 10^{13} avidin molecules bound through amide bonds to said core per cm^2 of surface area,

neutralizing moieties attached to core surface carboxyl groups that are not linked by amide bonds to avidin,

additional non-immunogenic proteinaceous material adsorbed on surfaces of said cores,

biotin moieties complexed to said avidin moieties, and

about 2×10^{11} and about 2×10^{12} antibody molecules linked through amide bonds to biotin moieties per cm^2 of surface area of said core.

28. A suspension of diagnostic particles in accordance with claim 27 in an aqueous medium.

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